THE TECHNICAL WRITER

The Opportunities and Duties of a Technical Trained Writer

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PERHAPS the most important question in the mind of any engineering student as he is completing his training course, is this: "What kind of a position should I attempt to secure immediately after my graduation?" The universal spread of college and university education today is releasing thousands of young men every spring from their educational work to their constructive life work. The increasing number of such men, all looking to their future, has introduced keen competition for the worth-while jobs. It is, therefore, well worth a man's time to consider carefully what he shall do with his talents when he leaves his alma mater.

After four years spent in pursuing a course in Electrical Engineering, it is quite natural for the student to dream of electrifying great railroads, harnessing great water falls, electrifying industry and doing the larger and more spectacular things in Electrical Engineering. I wonder how many such men ever think of the possibilities of combining their engineering knowledge with whatever talent they may have for writing, and so devote their future to the literary end of Engineering rather than to the design and construction fields. Since this is, perhaps, a new thought to many students, the question naturally arises: "What are the opportunities in the technical writing field?" This brief article will attempt to point out some of these opportunities.

The electrical manufacturing business is based fundamentally on inventions. Some inventions are arrived at by accident, but by far the greater number are arrived at by patient, systematic experiment and research directed by high-grade engineering talent. Around the invention is built a machine which forms the basis of the manufacturing company's product. Multiply the inventions and you will multiply the classes of apparatus which the company manufactures. All these, added together, cumulatively form the company's products.

It is now necessary to sell this apparatus into those fields—in the home, in industry, or i ntransportation—where they will be beneficial to mankind. The men who invent the machines, the men who develop the machines and the men who make the machines, do not sell them. How then is the salesman to have sufficient information and knowledge of the machine so that he can sell it? Here enters the technical writer. His talents are two-fold. His background of engineering knowledge permits him to fully comprehend the device and his ability to intelligently write this knowledge gives him the power of informing the salesman about its construction, application and operation.

In this connection, it is interesting to record briefly the evolution of selling in the technical field, of which the electrical industry is representative. In the early days of the industry, neither the salesman who sold the goods, nor the customer who bought the goods, were thoroughly acquainted with them. The construction and operation of the device was a mystery to both parties and in nearly every case the final purchase was made on the word and faith in the salesman. A salesman, therefore, could make almost any claim for his product and his customer had no easy way of checking whether he was right or not. Very little descriptive literature was written on the product and frequently the purchaser was compelled to do his own experimenting to determine whether the device would suffice for his needs. Service and safety engineering were in the nebulous stage and after a customer once bought a piece of apparatus he was confronted with the necessity of making it operate. In so doing, he gradually accumulated a very definite and intimate knowledge of the apparatus and so, in the evolution of things, it came about that in many cases the customer knew more about the product than the man selling it.

This condition forced the electrical manufacturing companies to reconstruct their selling forces and men with engineering knowledge who could talk intelligently about the products which they were selling were in great demand. That their selling force might be better equipped with a knowledge of the specific products which they were manufacturing, many of the electrical companies instituted training schools in which young technical graduates with the desire for salesmanship were put through an intensive course of training in the works, studying the installation and the operation of the various apparatus manufactured. The consumers of electrical equipment also gradually changed over their organizations until they were well supplied with fully trained engineering talent, and today both buyer and seller meet on a common plane of engineering knowledge.

Since this is so, the manufacturing companies must of necessity maintain a staff of technically trained men capable of translating engineering knowledge into the language of every day communication. The district offices and the salesmen in the field must be constantly acquainted with the changes and improvements in apparatus and the new devices perfected, so that they can intelligently sell the company's products. The technical writer must serve as a pioneer, for the salesman and his articles must be interesting and descriptive so that the prospective customer will recognize his need for such apparatus and the reason for his selection. In this way, the customer is in a very receptive mood when he is approached by the salesman and the message of the writer has accomplished its appointed task.

Service work is an important branch in every organization today and in this connection the technical writer has a definite duty to perform. He must supply installation and operation information to those customers who have already purchased apparatus and give the necessary information for ordering repair and replacement parts. The writer plays an important part in building up the good-will of the company by keeping the customers satisfied and assists the salesman in obtaining future orders from these same customers when the need again arises. Competition in business is becoming keener every year and customer service work, the outgrowth of this competition, is receiving more attention and study and it is the technical writer who must serve as the connecting link between the company and the consumer.

To a large extent the newspapers have been neglected as regards technical stories and this neglect may be attributed to the purely scientific language in which these articles have been presented in the past. The news-

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people may be reached and they afford a splendid chanpapers are one of the chief instruments by which the nel for educating the public in the latest engineering developments. The time is now at hand to supplant the sensational stories concerning the latest engineering developments, but the engineering articles must be written into the language of everyday communication that they may be intelligible to the readers. It is essential, however, that the writer have a technical training that he may cooperate with the engineer in obtaining the necessary information for his articles. The necessity of explaining the engineering details are eliminated to a large extent and the engineer is not obliged to supply information which to him seems obvious.

The technical writer has also an important duty to perform for the world in connection with the engineer. Perhaps above all others, the engineer has contributed most to the material welfare of humanity. Within the last century he has practically revolutionized the living conditions of civilized people, but as yet the engineer does not occupy his proper place in the scheme of things. Why is he not a more conspicuous citizen? Why do we not have home of the benefit of his trained mind in our public affairs? The membership of the Sixty-fifth Congress did not contain a single engineer in either the Upper or Lower House. It is indeed astonishing that in our country with its wonderful scientific and mechanical achievements, there stand out very few engineers or scientists whose voices are heard in our National councils, although it is highly probable that the engineer might indeed ve a very valuable public servant.

Nothing but praise can be given the engineer for the value of his work, but he has the training that will enable him to serve the public in a greater degree still, if he will but come out of his hermitage and mingle with the open world. In this country there is very little spontaneity of recognition of the men of science. We differ from the older countries in that, although we quickly recognize what the engineer does, we are not inclined to exalt him into the realms of distinction beyond his actual achievements. The technical writer will be performing a great public service by making men aware of the engineer and bringing him out of his isolation into his fullest obligations of citizenship.

The duties that logically fall within the field of the college-graduate writer are varied. We might classify them roughly as follows:

(a) Description of apparatus for the sales staff.

(b) Description of apparatus for the prospective customer so he shall recognize his need for such apparatus.

(c) Furnish installation and operating information to the customer who has already purchased the apparatus.

(d) Furnish information to customers for ordering repair and replacement parts for apparatus.

(e) Descriptions of apparatus installations and operating data for the technical and trade publications.

(f) Write appropriate description of apparatus for newspapers.

(g) Write articles for the various house organs maintained by your company. These will consist usually of

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a magazine for the manufacturing of works department. one for dealers, one for your export department, etc.

(h) Furnish advertising copy for popular advertising media such as *Saturday Evening Post, Literary Digest, Nation's Business,* etc., also for newspapers.

(i) Supply advertising copy for Technical and Trade papers.

(j) Write promotion letters for direct mail selling of such apparatus as can be merchandised direct.

In short the duties of a technical writer are without end. The rapidly changing tasks which face him are always interesting and extremely fascinating. No one ever saw a technical writer suffering from ennui—he doesn't get a chance to get stale on one job—other problems are constantly confronting him and the thrill of action is always his. There is real satisfaction in solving a difficult problem by virtue of the written word. The pen is a mighty weapon in these days of intensified training and there are no limitation to the field of the technical writer. The social relations between the buyer and seller will influence a sale—but before the contract is definitely placed the thought that will count most will be the product, itself—its efficiency, reliability, adaptability, strength, etc., and investigation will disclose that in most cases some technical writer has recorded these things in so interesting, definite, and conclusive a way that he is entitled to a good share of credit for the final purchase.

The technical writer is constantly increasing and building up a vast store of knowledge for himself and he is not limiting himself to any one branch of the engineering profession. Specialization is essential and necessary in all lines of endeavor, but one should not limit the scope of his activities to the neglect of everything else that is going on around him. And the technical writer obtains more than a smattering knowledge of the apparatus—convincing articles cannot be written by one not familiar with his subject and the writer fails in his appointed task if his presentation does not convince his readers. It is therefore necessary that he keep in constant communication with the engineers. He must study new inventions, perfections and achievements in design and operation and develop an engineering appreciation that he may be properly qualified to present accurate engineering details. In this way the technical writer obtains a view of the work similar to that held by the officials of the organization—not an insight which permits of his engaging in research work, but a broad comprehensive view of the industry—an essential requisite for management.

The salaries in the technical writing field are comparable to those in the engineering while the results are much more quickly recognized, with the possibilities of advancement thereby enhanced. While serving the company to the best of his ability, the writer has a splendid opportunity at the same time for building up prestige for himself in his chosen profession. Through his articles he gradually becomes well known and in time finds himself in that enviable position of a recognized authority. A comparatively virgin field, the chances of success are as great as they are unlimited and with the added incentive that he is performing a public service through his educational articles, the college graduate entering the technical writing field is afforded exceptional opportunities.